

REMARKS

Claims 1, 4-14, and 16-20 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

CLAIM OBJECTIONS

Claim 5 stands objected to for certain informalities. Applicant has amended the claim according to the Examiner's suggestions. Therefore, reconsideration and withdrawal of this objection are respectfully requested.

DRAWINGS

The drawings stand objected to under 37 CFR 1.83(a) for allegedly not showing the features in claims 21 and 22. Notwithstanding, claims 21 and 22 are cancelled. The objection to the drawings, therefore, is moot.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hyman, et al. (U.S. Pat. No. 5,217,355). This rejection is respectfully traversed.

Claim 1 is amended to recite the features of Claim 2 and Claim 3. Further, Claim 1 is amended to recite that "each of the curved portions [3, 6] has a pushed portion which is pushed by the corresponding opening/closing mechanism [11] to be deformed and an opening/closing portion [4 or 7] which is folded to close the flow path when the pushed portion is pushed by the corresponding opening/closing mechanism [11], the

opening/closing portion [4 or 7] is provided at a position out of the pushed portion.” See Figure 2. below.

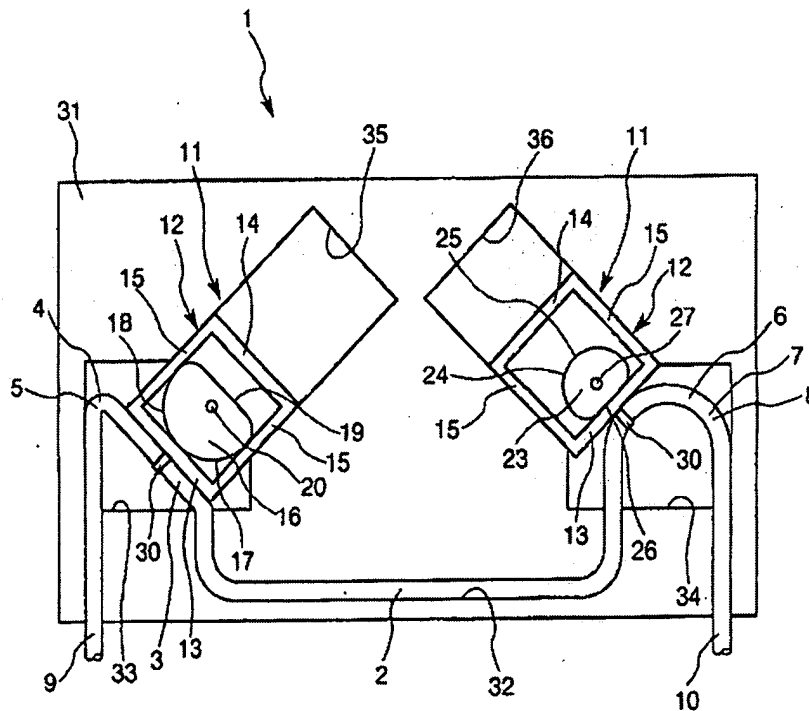
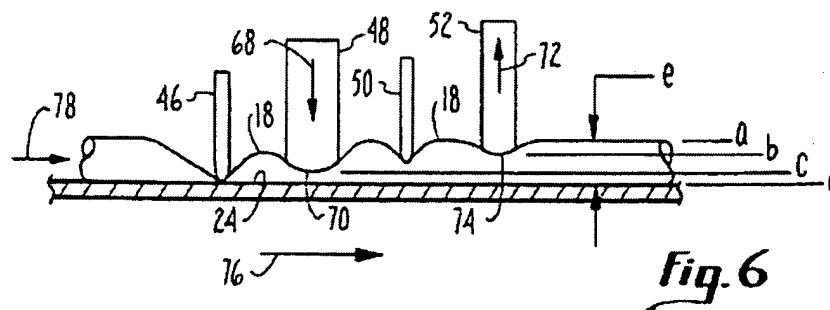
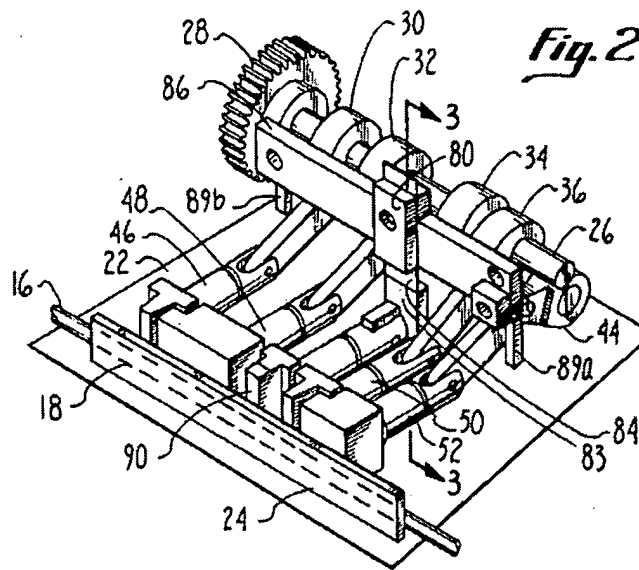


Fig. 2

In the tube pump (1) of the claimed invention, the tube (2) has two curved portions (3, 6) provided at two spaced portions for opening and closing the flow path. Further, each of the curved portion (3, 6) has the pushed portion and the opening/closing portion (4 or 7) provided at a position out of the pushed portion wherein the opening/closing portion (4 or 7) is folded to close the flow path when the pushed portion is pushed by the corresponding opening/closing mechanism (11). According to the tube pump (1) of the claimed invention, it is sufficient to merely carry out pushing the pushed portion of each of the curved portions (3, 6) and releasing the pushing state of the pushed portion of the curved portion (3, 6) when the fluid is transferred. It is

possible, therefore, to effectively transfer the fluid at a small amount of energy, which saves energy. It is also possible to reduce a running cost thereof. See line 30 of page 3 to line 3 of page 4 of the application.

In contrast, Hyman, et al. discloses a two-cycle peristaltic pump for pumping fluid through a resilient tube having a pair of pumping fingers as shown in Fig. 2 and Fig 6, below.



In the two-cycle peristaltic pump of Hyman, et al., the tube (16) has two opening/closing portions provided at two spaced portions of the tube (16) for opening and closing the flow path (78) as shown in Fig. 6. Further, each of the opening/closing portions of the tube (16) is pressed to platen (24) by the pumping finger (48 and 52) corresponding the cam portion (32, 36) for closing the flow path (78) at the opening/closing portion of the tube (16). In the two-cycle peristaltic pump of Hyman, et al., however, the opening/closing portion of the tube (16) is directly pressed by the pumping finger (48 or 52) to close the flow path (78) and is not folded to close the flow path by pushing another portion provided at a position out of the opening/closing portion like the claimed invention. Hyman, et al., therefore, does not disclose the features of the claimed invention.

For the above reasons, Hyman, et al., does not anticipate the tube pump recited in Claim 1 and its corresponding dependent claims.

Claim 14 is amended in the same manner as Claim 1. Claim 14 and its corresponding dependent claims, therefore, are not anticipated for at least the same reasons.

Claims 21-22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Shim (U.S. Pat. No. 4,278,085). This rejection is respectfully traversed.

Claims 21-22 are cancelled. This rejection, therefore, is moot.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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By: /G. Gregory Schivley/
G. Gregory Schivley, Reg. No. 27,382
Bryant E. Wade, Reg. No. 40,344

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. Box 828
Bloomfield Hills, Michigan 48303
(248) 641-1600

GGG/BEW/JAH